NATURAL RESOURCES DEFENSE COUNCIL

February 7, 2006

Mr. Paul Marshall
SDIP EIS/EIR Comments
State of California Department of Water Resources, Bay-Delta Office
1416 Ninth Street
Sacramento, CA 95814

Ms. Sharon McHale
U.S. Bureau of Reclamation, Mid-Pacific Region
Draft EIS/EIR Comments
2800 Cottage Way
Sacramento, CA 95825

Re: **Comments Regarding the South Delta Improvements Program DEIS/DEIR**

Dear Mr. Marshall and Ms. McHale,

On behalf of the 130,000 California members of the Natural Resources Defense Council, we offer the following comments regarding the SDIP DEIS/DEIR. NRDC believes that this document does not meet the requirements of CEQA and NEPA. In addition, the approach adopted by DWR and the Bureau regarding this project represents a major departure from the collaborative, open, science-based and balanced approach advocated by the CALFED Bay-Delta Program. A failure to address the fundamental flaws in this document would damage the credibility of DWR, the Bureau and CALFED. Given the precarious status of many of the estuary's fisheries, we urge the agencies to modify both the substance of the proposed project and the process by which they are seeking approval. The flaws in this document include, but are not limited to the following comments.

Relationship with the CALFED Bay-Delta Program

The document inaccurately describes the relationship of the project to the CALFED ROD. The document asserts that the proposed project is "consistent with the CALFED Program" (ES-1) and is "fully consistent with CALFED's overall goals of water supply reliability, water quality, ecosystem restoration and levee system integrity" (ES-1). This is not accurate. For example, the environmental protections (e.g. EWA)

incorporated in this document are far less than required by the ROD and are inadequate to achieve the CALFED ecosystem restoration goals. The following list includes some of the inconsistencies between this project and related requirements in the ROD:

- The CALFED process is required by law to produce a balanced program. On the other hand, this project appears to sacrifice ecosystem health and water quality in order to increase water deliveries.
- The proposed project falls far short of the EWA assets required by the ROD (CALFED ROD, p. 54-58). This issue is discussed further below.
- The CALFED ROD requires annual funding for the CALFED ecosystem restoration program of at least $150 million per year, as a condition of maintaining ESA assurances for delta exporters. Given rapidly diminishing state bond funds, scarce federal funds, and the reluctance of water users to pay for this program, it is likely that these levels will not be maintained in the near future. However, the document does not discuss the likelihood of maintaining this funding level, which was found in the ROD to be necessary to ensure ESA compliance. The lack of funding for ecosystem restoration would significantly reduce the ability of fisheries agencies to implement restoration projects to mitigate the impacts of the CVP and SWP.
- State and federal agencies have failed to implement the $35 million annually in new user fees designed to support the CALFED Ecosystem Restoration Program (CALFED ROD, p. 38). These user fees would be of significant assistance in maintaining the required funding level for ecosystem restoration.
- The document does not discuss the ROD requirement that any increase in SWP pumping is "conditional upon avoiding adverse impacts to fishery protection" (CALFED ROD, p. 49.) Given the negative impacts of this project and the precipitous decline of delta health, the proposed project clearly does not comply with this requirement.
- The CALFED program established a target of "continuously improving delta water quality for all uses" (CALFED ROD, p. 65). However, this document predicts degradation of delta water quality (p. 1-30, 5.3-36, 5.3-42).
- The CALFED ROD emphasizes improvements to "water supply reliability" (CALFED ROD, p. 40). However, as discussed below, the proposed project would increase short-term supplies at the risk of reducing long-term reliability.

A revised DEIR/DEIS should be issued, clearly indicating the areas in which funding for environmental restoration, water dedicated to the environment, water quality and other characteristics of this project conflict with or undermine provisions of the CALFED ROD. We recommend that the project be modified to conform to the ROD.

The document fails to analyze the impacts that the proposed project could have on the CALFED Ecosystem Restoration Program. The goal of this program is:

> "To improve aquatic and terrestrial habitats and natural processes to support stable, self-sustaining populations of diverse and valuable plant and animal species through an adaptive management process. Implementation of the ERP includes recovery of

> species listed under the State and Federal Endangered Species Acts." (CALFED ROD, p. 35)

As the comments in this letter and the analysis in this document indicate, the proposed project could have significant negative impacts on the Bay-Delta ecosystem. However, the document does not discuss how this project would affect progress toward and the likelihood of success of the CALFED Ecosystem Restoration Program. In particular, the document does not adequately analyze how it will contribute to the recovery of endangered species.

An adequate analysis of these potential impacts is particularly important because balanced progress towards the CALFED ecosystem goal is required by the state and federal authorizations for the CALFED program.

The document fails to analyze impacts on the CALFED Water Quality Program: The document acknowledges that the project is likely to degrade water quality (p. 1-30, 5.3-36, 5.3-42). However, the document does not adequately discuss impacts to the CALFED program's efforts to achieve "continuously improving Delta water quality for all uses" (CALFED ROD, p. 65).

Alternatives, Projected Water Demand and Potential Water Supply

The document fails to include a full range of alternatives. Specifically, the project description is impermissibly narrow to meet the requirements of CEQA and NEPA. The three operational alternatives retained for further consideration all include significant increases in water exports (Figure 4-2). The document rejects alternatives such as reducing exports (p. A-13) and fallowing agricultural land (p. A-34).

In rejecting land fallowing, the document states that this alternative does not meet the export objective (p. A-34). In this discussion, the project is improperly defined as increasing water diversions. It should properly be defined as striving to provide reliable water supplies. This correct definition would allow alternatives that would reduce demand to be considered on a level playing field with those that would increase supply. Rejecting alternatives simply because they are not the agencies' preferred method of providing water supplies (i.e. increasing delta diversions) violates the requirements of CEQA and NEPA.

If this approach were deemed to be acceptable, it would suggest, for example, that a proposed wetland fill or surface storage project could avoid evaluating any alternative sites simply by constraining the project purpose to a particular site.

The lack of a full range of alternatives is also reflected by the conclusion that the operational alternatives have similar potential impacts (p. 6.1-112 and 6.1-113). It is not credible to assert that the agencies do not have alternatives available to them that would result in varying impacts to the delta environment.

Further, the document states that a reduction in delta pumping is inconsistent with local delta-specific objectives regarding deliveries to the South Delta Water Agency (p. A-13). The document, however, fails to mention that in-delta water users support the evaluation of a reduced delta pumping alternative. Thus, this criterion is misapplied. Likewise, the criteria are misapplied when the document states that increasing water diversions "does not meet the fish objective" (p. A-34). In fact, reduced delta pumping could assist with reducing entrainment of salmon at the pumps, the two fisheries related alternatives (p. A-2). Such an alternative would also assist with the restoration of delta fisheries and the delta ecosystem, which should have been included as an objective of the project.

The revised document must include an analysis that significantly reduces delta diversions, per the Third District Court of Appeals decision in *RCRC et al v. State of California*. The need for such an analysis is clearly demonstrated by the fact that the alternatives considered by the Bureau to address the drainage problems in the San Luis Unit of the CVP include land retirement. Regarding drainage issues, the Bureau has found that land retirement is a legitimate alternative. It has been improperly excluded from this analysis.

The document improperly dismisses alternative water supplies highlighted by the State Water Plan. The newly released State Water Plan (http://www.waterplan.water.ca.gov/cwpu2005/) demonstrates the significant potential of a wide range of alternatives to provide reliable water. Indeed, this plan reveals that the potential supply from increased delta pumping is far lower than other water management tools, such as urban water conservation. The scale of potential supply benefits from other water management tools demonstrates that there are practical alternatives that would allow DWR and the Bureau to evaluate an alternative in this document that would reduce delta diversions. Finally, the document fails to discuss the demonstrated benefits of these alternative water supply tools. For example, the document fails to discuss the fact that several urban areas have grown substantially over the past several decades; however, as a result of investments in water conservation and other water management tools, these areas have not seen a proportional increase in their water consumption. Demand-side water management tools have are clearly demonstrated to be credible alternative sources of reliable water. They have been improperly excluded from this analysis.

The document fails to account for the likelihood of decreased agricultural water demand. The document assumes that future demands by south of delta agriculture will be the same in the future (Table 5.1-1). However, the new State Water Plan finds that agricultural demand south of the delta is likely to be significantly lower in the future. (Although this report was recently released, this analysis was performed by DWR and was available for inclusion in this document.) In fact, agricultural water leaders have advocated such a reduction. For example, Tom Birmingham, General Manager of the Westlands Water District, has advocated a land retirement program that would reduce irrigated acreage within that district by one third – 200,000 acres (Op-Ed by Tom Birmingham, Bakersfield Californian, May 1, 2002). Clearly, a land fallowing program

is acceptable to agricultural water leaders and could be incorporated in an alternative that would reduce delta pumping.

The document fails to include the Bureau's projections regarding future CVP water deliveries. As discussed above, the document fails to project reductions in San Joaquin Valley agricultural water demand. In addition, the document fails to incorporate the Bureau's projections regarding future CVP water deliveries in the Sacramento Valley. The document projects Sacramento River water demands to be unchanged in the future (Table. 5.2-2). However, in a letter to Congressman George Miller dated December 23, 2004, Bureau Commissioner John Keyes stated that the Bureau intends to make full deliveries of the water quantities included in renewed CVP contracts. NRDC has provided documents to both the Bureau and DWR that demonstrate that actual water use in recent years has been more than 560,000 acre-feet below these contract totals. If the Bureau intends to make full deliveries in the Sacramento Valley, the document must incorporate these projections, and modify the impacts analysis accordingly.

The document inaccurately constrains projected future demands for cross-delta water transfers. The document suggests that future demand for cross-delta water transfers will be a maximum of 600,000 acre-feet per year (p. 5.1-51). However, in the past, more water than this amount has been transferred in a single year. In addition, in personal conversations, staff from state and federal agency have indicated that actual demand for cross-delta transfers could be as much as 800,000 TAF to 1 MAF in a single year. The analysis of the hydrologic record in the document concludes that the project would lead to 601 TAF of transfers in at least 6 years (Table 5.1-15). This conclusion suggests that pumping capacity would allow transfers greater than this amount. Indeed, south of delta water users have cited increased transfer capacity as one of the benefits of the proposed project. Given that there is nothing in the proposed project that would prohibit transfers above this level, this assumption artificially lowers potential impacts. The revised document should analyze the potential impacts if actual demand for cross-delta transfers proves to be higher than 600,000 af/y.

<u>Environmental Water Account and Water Supply Reliability Impacts</u>

The document does not adequately analyze the weakening of environmental protections included in the CALFED ROD and inaccurately describes the Environmental Water Account. The CALFED ROD required many specific environmental protections measures. For example, the ROD required specific amounts of water for the Environmental Water Account. In the discussion of the EWA, the ROD included careful definitions of the water to be provided by tiers 1 and 2 of the Environmental Water Account (CALFED ROD, p. 54-58). It also required additional water to be provided under Tier 3, should this water be required. However, these assets have not been implemented as required by the ROD.

This failure has been widely observed. For example, Environmental Defense has prepared an analysis, entitled *Finding the Water*, of the failure of DWR and the Bureau

to implement the protections required by tiers 1, 2 and 3 of the Environmental Water Account. This document is available at the following site: http://www.environmentaldefense.org/documents/4898_FindingWater.pdf The Environmental Defense analysis reveals that, during the past several years, the EWA has been 300,000 to 400,000 acre-feet short of the requirements of the ROD, on an annual basis. As a result, fish protection and restoration actions have been severely curtailed.

In addition, during 2005, delta smelt and other delta fish species experienced a decline to historic lows. Fisheries biologists are now concerned that the smelt could become extinct in the coming few years. During 2005, however, because of the inadequacy of EWA assets, fisheries agencies curtailed EWA actions designed to protect the delta environment. Clearly, Tier 3 assets were required this year to meet the requirements of the ROD and the ESA. However, these assets were not provided. Thus, Tiers 1, 2 and 3 fall far short of the requirements of the CALFED ROD.

In the delta smelt OCAP Biological Opinion, the Fish and Wildlife Service acknowledged the potential impacts of this project and the unreliability of the EWA. That document states:

> "In summary, the threats of the destruction, modification, or curtailment of its habitat or range resulting from extreme outflow conditions, the operations of the State and Federal water projects, and other water diversions as described in the original listing remain. The only new information concerning the delta smelt's population size and extinction probability indicates that the population is at risk of falling below an effective population size and therefore in danger of becoming extinct. Although VAMP and Environmental Water Account have helped to ameliorate these threats, it is unclear how effective these will continue to be over time based on available funding and future demands for water" (Delta Smelt OCAP BO, p. 121-122).

The document also does not discuss this possibility that Tier 1 or 2 of the EWA could be further reduced. For example, the Westlands Water District is continuing to seek further weakening of the implementation of CVPIA Section 3406(b)(2) (e.g. Letter to Lester Snow and Ryan Broddrick from Kern County Water Agency, Metropolitan Water District of Southern California, San Luis and Delta-Mendota Water Authority and Westlands Water District, November 8, 2004). This provision of federal law dedicated 800,000 acre-feet of CVP water annually to environmental protection and restoration. If the Department of Interior were to decide to weaken implementation of the CVPIA again, tier 1 of the EWA would be further reduced.

Further, the CALFED ROD described specific estimates of EWA assets (ROD, p. 58), establishing a relatively low target for north of delta purchases. However, in recent years, the EWA has purchased more water north of the delta than assumed in the ROD. This has resulted in increased delta pumping than assumed by the ROD. The document does not adequately address the potential impacts of this change on the environment.

The document further inaccurately describes the Environmental Water Account when it states that the EWA as described in the OCAP and this document is "greater than CALFED ROD EWA" (p. 6.1-2, 6.1-96, 6.1-115). In fact, as discussed above, the amount of water provided by the EWA pursuant to the OCAP today is significantly less than that provided by the ROD.

DWR and the Bureau have consistently refused to analyze the impacts of these dramatic changes. By failing to adequately describe baseline conditions and minimum EWA requirements, the document relies on a tool with little certainty, in terms of its potential to mitigate for the impacts of the proposed project. This document provides no mechanism to ensure that the EWA water assumed to be available will be provided with greater reliability than in the past.

If the agencies propose to rely on the EWA, the revised document should clearly state the minimum requirements of this tool. The document should provide a clear, reliable mechanism to provide all of this water. Finally, it should clearly state that all ESA delta assurances will be terminated if these minimum requirements are not met. Such a change would provide a clear mechanism to ensure compliance with the ESA and CESA.

The document inaccurately describes the water supply reliability impacts of the project. The document indicates that the project is designed to improve reliability (p. 1-15) and predictability (p. 1-19) of water supplies. However, an increase in delta diversions could harm the reliability of water supplies used by south of delta agencies. For example, such an increase in diversions would increase the vulnerability of south of delta water users to potential failure of delta levees. These risks are significant, as indicated by the recent and widely-cited study by Dr. Jeffrey Mount of the University of California at Davis. In addition, by further harming delta species and increasing the likelihood of additional ESA listings, the operational phase of the project could increase regulatory constraints on the CVP and SWP, thus decreasing water supply reliability. These risks are inadequately discussed in this document. In fact, the document reaches a contrary conclusion that the project will improve reliability.

In addition, water supply reliability is used as an objective for screening alternatives (p. a-2). However, this criterion is misapplied. The document does not indicate that an increase in delta diversions could reduce reliability, nor does the document discuss the higher reliability of many alternative supply sources.

Natural Resource Impacts

The document does not adequately describe potential impacts to the delta smelt. The document does not adequately review the current status of the smelt. The smelt index for the past year has been the lowest ever recorded (*e.g.*, Matt Weiser, "New Low for Tiny Fish," *Sacramento Bee*, October 31, 2005; Mike Taugher, "Environmental Sirens in the Delta are Screaming," *Contra Costa Times*, May 1, 2005.) The fall

midwater trawl index for September and October, 2005, and the delta smelt recovery index fell to 4. To put this in perspective, the Biological Opinion states that a recovery index of less than 74 should trigger "concern" and consideration of a number of management responses to halt the decline. Biologists are increasingly concerned that the smelt could become extinct in the coming few years (e.g., Bennett, W.W. and K.T. Honey, *Modeling the Canary: How Do We Assess Population Viability for the Threatened Delta Smelt?*, Proceedings of the 2004 CALFED Bay-Delta Program Science Conference.) The document similarly fails to present an adequate summary of the status of other delta fish species that have suffered similar declines in recent years (http://www.science.calwater.ca.gov/pdf/workshops/POD/CDFG_POD_Pelagic_Fishes_Trends.pdf).

The Fish and Wildlife Service's August, 2004 Delta Smelt OCAP Biological Opinion clearly indicates serious potential impacts of increased delta pumping.

> "In summary, the operations of the Projects under formal consultation as described in the Project Description will result in adverse effects to delta smelt through entrainment at the CVP and SWP and by drawing delta smelt into poorer quality habitat in the south delta (Delta Smelt, OCAP BO, p. 176).
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> "Even if D-1641 X2 standard continues to be met, there could be adverse effects to delta smelt if X2 moves upstream of Chipps Island in the future Study (as modeled in the BA). Since delta smelt generally move with X2, a further upstream location of X2 near Chipps Island in the future Study could result in a distribution pattern wherein more delta smelt would be susceptible to entrainment and elevated mortality in the Central and South Delta due to high temperatures or predation." (Delta Smelt, OCAP BO, p. 140).

The document does acknowledge that delta smelt salvage could increase "from 15% to 35% (p. 6-1.95). However, the document relies on an ineffective and unreliable EWA to reduce these impacts (6.1-96). Given the status of the smelt, the increasing probability of extinction, the potential impacts of the project and the proven inadequacy of the EWA, the document inappropriately concludes that the project will result in "less-than-significant" impacts (p. 6.1-96).

The document also states that "no specific reason should be assumed at this time," for the decline in delta pelagic fish. However, as discussed above, the Fish and Wildlife Service has already determined that proposed operations could further harm the smelt. In addition, the CALFED Science Panel review of the decline of pelagic fish concluded that exports may be a significant cause of the decline of pelagic species. (**http://science.calwater.ca.gov/pdf/workshops/IEP_POD_2005WorkSynthesis-draft_111405.pdf .)**

In addition, an analysis of the impacts of delta pumping has been prepared by the Bay Institute (attached). This analysis reveals potential impacts from increases in delta pumping, including interim operations, which are more significant than are included in

the document.

Some of the potential impacts of this project could be impossible to remedy. For example, a miscalculation regarding the impacts of the proposed project could contribute to the extinction of the delta smelt. The document fails to exercise appropriate caution in considering this issue.

The document fails to analyze potential impacts on longfin smelt. This species has suffered a significant decline in abundance and been proposed for listing under the Endangered Species Act. In addition, biologists have found that longfin is highly sensitive to delta outflow (see sources cited in previous comment). Therefore, longfin could be particularly vulnerable to cumulative impacts from water diversions and the specific impacts of the operational phase of this project. The document acknowledges that longfin smelt could be affected by the project (Table 6.1-1). These potential impacts, however, are not adequately discussed. In fact, longfin is excluded from the species-by-species analysis of vulnerable species (p. 6.1-4 et seq.)

The document incorrectly dismisses serious impacts to splittail. The document acknowledges that the project could increase splittail salvage by up to 40%, but incorrectly concludes that no mitigation is necessary (p. 6.1-99). The splittail has also been proposed for listing under the Endangered Species Act. Reductions in the frequency of floodplain inundation and increases in salvage could have a serious impact on the species. For example, a reduction in floodplain inundation prior to splittail spawning could have an impact on food availability.

The document incorrectly characterizes the entrainment impacts the project could have on juvenile spring and winter run Chinook salmon. The document indicates that the proposed project has the potential to cause a dramatic loss of juvenile salmon (p. 6.1-85-86). The document relies on the EWA as a mitigation tool; however, as discussed elsewhere in these comments, the document fails to analyze the potential impacts in the likely event of the failure of the EWA.

The document does not adequately describe potential temperature impacts on salmon. During the 1987-1992 drought, the Bureau proposed to drain Shasta Lake to "dead storage", in order to maximize CVP water deliveries. In fact, it was this proposal that led NMFS to impose a carry-over storage requirement on the operations of Shasta Dam, in an attempt to ensure adequate cold water to protect downstream salmon. The NMFS OCAP BO eliminated this storage requirement and weakened downstream temperature protections. The document does acknowledge that model runs reveal that end-of-year storage is likely to be lower than 1.9 MAF in Shasta in some years (p. 5.1-11). However, this document does not adequately discuss the extent to which the increase in pumping, and the agreement to wheel CVP water, could lead to re-operation of Shasta Dam, with serious impacts on downstream fisheries. In particular, the document should analyze the temperature impacts if Shasta Dam is operated to maximize water deliveries during extended droughts. The same analysis should be prepared for other SWP and CVP storage facilities.

The document does not adequately describe potential impacts to ecosystem functions on rivers below major CVP and SWP storage facilities. For example, the document does not adequately describe potential impacts on riparian recruitment and other important ecosystem functions on the reaches of CVP and SWP controlled rivers between storage facilities and the delta. These ecosystem functions could also be affected by the aggressive operational scenarios discussed above.

The document fails to adequately analyze the potential impacts of the project on San Joaquin River salmon. The document acknowledges significant potential entrainment impacts for San Joaquin Rivers Chinook salmon (p. 6.1-82). The document relies on EWA actions to minimize these impacts (p. 6.1-83). However, the document does not discuss the unreliability of the EWA, as discussed above. In fact, the document clearly suggests that, should the EWA fail to provide adequate resources, fisheries protection measures may not be implemented (p. 6.1-83). Further, in August of 2004, the federal district court in Sacramento found, in *NRDC v. Rodgers*, that flows to the dry upper San Joaquin River, below the Bureau's Friant Dam, must be restored. In a letter dated August 2, 2005, from the National Marine Fisheries Service to the State Water Resources Control Board, NMFS discusses this federal court ruling and concludes that "It is likely as a consequence of this decision that flows will be returned to the San Joaquin River." Thus, restoration of the San Joaquin is a reasonably foreseeable action. Clearly, salmon on the restored reach of the river could be harmed by the proposed project. These potential impacts are not adequately analyzed.

The document fails to analyze adequately the impacts of proposed interim operations. One hypothesis regarding the recent decline of delta pelagic organisms is that increases in winter pumping may not be as biologically benign as had been previously assumed. Given that the proposed interim operations would be focused during this period (p. 2-2), these operations could have substantial impacts. The document includes no reasoning to justify this increase in delta pumping prior to the completion of additional information regarding the decline of delta fisheries.

The EWA is the primary tool cited in discussions of efforts to reduce the fisheries impact of the operational phase of the project. However, the discussion of interim operations states that there will be "no impact on EWA." Thus, it is not clear if this tool has been excluded as a mitigation tool for interim operations, or if interim operations would provide EWA water in an attempt to self-mitigation. In short, the document includes no specific requirements to clarify the general statement that interim operations will not be allowed if they would result in "substantial fish effects" (p. 6.1-105). As is discussed above, the CALFED ROD contains very similar language regarding the proposal to increase delta pumping limits. However, the concerns in this letter clearly demonstrate that DWR and the Bureau have found it difficult to develop a project that complies with this requirement.

The document does not adequately describe potential impacts to the Trinity River. For example, the document focuses its analysis on coho salmon and fails to adequately

analyze potential impacts on steelhead and Chinook salmon. These species do not have the same life history as coho and may be more sensitive to some potential impacts from the proposed project. Cold water from the Trinity system contributes to survival of Klamath River salmon. However, this document fails to adequately analyze the potential for reoperation of Trinity Dam, as a result of this project, to harm the Klamath River.

The document incorrectly relies on a flawed NMFS OCAP Biological Opinion. The Department of Commerce Inspector General's review of the NMFS OCAP Biological Opinion found that the agency violated internal procedures regarding this document. In addition, the CALFED Science Program review of the NMFS OCAP BO found that it failed to include the best available science (http://science.calwater.ca.gov/pdf/workshops/OCAP_review_final_010606_v2.pdf). These two reviews suggest that political interference prevented the agencies from applying the best available science to the analysis of OCAP, including analysis of the proposed project. It is inappropriate for this document to rely on the flawed NMFS document, and its flawed conclusions regarding compliance with the ESA. The deficiencies cited in the CALFED review should be addressed and resolved in the revised document.

Water Quality Impacts

The document fails to discuss adequately the potential water quality impacts of the proposed project. For example, the document does not adequately analyze the water quality impacts of the delivery of water that would be provided by the project to drainage-impaired lands served by the CVP and SWP. Water used on these lands, which otherwise might be retired or subject to greater water conservation measures, is likely to exacerbate water quality problems in the San Joaquin River and in evaporation ponds. The inclusion of an alternative that would reduce delta pumping would demonstrate that different operational regimes for the delta pumps can result in different water quality impacts.

The document also does not adequately discuss violations of delta water quality objectives for which DWR and the Bureau are jointly responsible. For example, the document does not discuss the fact that the State Water Resources Control board is considering the issuance of a cease and desist order against DWR and the Bureau regarding violations of these objectives. The document does not discuss the impact that the proposed project would have on efforts to achieve compliance, or if other alternatives would be of greater benefit in terms of achieving compliance.

Cumulative Impacts

The document does not adequately analyze potential cumulative impacts. The discussion of cumulative impacts is remarkably brief, incomplete and inadequate, particularly for a project of this magnitude in a complex system that is so highly degraded. The decline of delta fisheries and of other resources in the Bay-Delta

watershed is a study in cumulative impacts. Upstream and delta diversions, water quality problems and invasive species have all played a role in the decline in the health of the Bay-Delta ecosystem. The SWP and the CVP control the two largest water projects in the watershed. Considered comprehensively, the construction of these projects and their ongoing operation has had a major impact on the Bay-Delta ecosystem. In addition, water use and agricultural return flows associated with these projects contribute to water quality degradation. Finally, water project operations have played a significant role in modifying the ecosystem and making that ecosystem more hospitable to invasive than to some native species.

Given the number of fish species currently listed pursuant to ESA and CESA, and the number of fish proposed for listing, an adequate analysis of cumulative impacts is particularly important. Given the precarious status of the delta smelt, a single project with limited direct impacts could, when considered from a cumulative perspective, provide the final blow leading to extinction. This issue was discussed recently in the Northern District's February 3, 2006 order granting a temporary restraining order regarding the Intertie Project in *PCL v. U.S. Bureau of Reclamation*.

We will offer only one specific example of the failure of this analysis. The cumulative impacts analysis excludes the renewal of CVP contracts that will direct the delivery of millions of acre feet of water for at least 25 years (Table 10-1). The CVP is currently unable to deliver full contract quantities under the renewed and proposed renewed CVP contracts. In addition, as discussed above, the Bureau intends to make full deliveries in the future. This failure is particularly glaring, given the fact that the discussion of cumulative impacts does mention the importance of the OCAP and the OCAP Biological Opinions (p. 10-4), which are the ESA compliance documents for the renewal of CVP contracts.

Segmentation and CESA Compliance

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The proposed environmental compliance process has been improperly segmented. The document states that the two phases of the project have been separated to allow the agency to analyze "additional information collected on the condition of pelagic organisms in the Delta." (p. ES-2) The document further states that the preferred alternative for the operational phase will be developed on the basis of this new information (p. ES-4). However, the document also states that the agencies do not intend to perform a full DEIR/DEIS on the basis of that new information. Rather, it states that a supplemental document will be circulated, immediately prior to the signing of the ROD (p. ES-2, 2-5).

Clearly, the lead agencies anticipate the development of significant new information prior to the circulation of the proposed supplemental document. Indeed, the development of this information is the very reason why the project has been separated into two phases. Given that the agencies fully expect new information to be developed, and that this information will be used to develop a preferred alternative, CEQA and NEPA require the circulation of a full, new DEIR/DEIS.

The document does not adequately discuss compliance with the CEQA and the California Endangered Species Act. The document discusses the OCAP as a joint state/federal document (p, 10-4). It does not, however, discuss who this document complies with CESA or CEQA. This is particularly important because, given the phased nature of this project, it is not clear how CESA compliance will be achieved prior to the implementation of the operational phase of this project (p 8-20).

Climate Change and Energy Impacts

The document does not evaluate how the impacts of global warming would affect the impacts of the project. The proposed project would be in place for decades. It is reasonably foreseeable that climate change would change hydrological conditions in the Bay-Delta watershed. In fact, these potential impacts are anticipated by the new State Water Plan. For example, these changes could reduce spring and summer stream flows, and increase river temperatures. By failing to analyze these expected changes, the document fails to discuss how the proposed project could exacerbate expected impacts from climate change.

The document does not adequately analyze the energy and global warming impacts of the proposed project. NRDC's analysis of the energy impacts of water management decisions (*Energy Down the Drain*, 2004, http://www.nrdc.org/water/conservation/edrain/contents.asp) demonstrates that a large amount of energy is consumed by water use, particularly in urban areas, that extends far beyond the direct energy consumed to pump water from the delta. This analysis found, for example, that end use can consume more water than is consumed pumping water to its point of use. Recent analysis by the California Energy Commission has reinforced this conclusion. However, the document inappropriately limits the analysis of energy impacts to electricity directly required by the CVP and SWP (Table 7.5-3). Thus, it understates the energy, air quality and global warming impacts of the project.

Models

The document inappropriately relies on a flawed CALSIM II program. The 2003 scientific review of the CALSIM II model revealed major weaknesses in this tool. A recently completed CALFED evaluation of this tool also concluded that "large uncertainty remains", particularly regarding critically important salinity issues. (http://science.calwater.ca.gov/workshop/calsim_05.shtml). Given that salinity and related flow issues are critical to the analysis of impacts including but not limited to delta smelt, longfin smelt and water quality, this failure represents a major shortcoming. The document fails to correct these flaws or to discuss adequately these shortcomings. Continued use of CALSIM II in its current form does not represent the best science available.

Adaptive Management

The document inaccurately describes the existing and proposed adaptive management program. The document includes a discussion of adaptive management (p. 6.1-114), which explains how SDIP mitigation measures will be adapted over time, as a result of monitoring and research. This discussion, however, is contradicted by recent experience. As discussed above, DWR, the Bureau and state and federal fisheries agencies have not conducted a thorough analysis of the failures of the EWA. This led Environmental Defense to prepare their report *Finding the Water*. The agencies have failed to analyze and respond to that report or to analyze how the shortfalls in the EWA may have harmed delta resources. This refusal to analyze an issue as fundamental as the amount of water available to the EWA demonstrates a reluctance to engage in effective adaptive management.

The proposed project does not include any mechanism that would lead a reasonable observer to conclude that the proposed EWA will be significantly more reliable than it has been in recent years. To the contrary, the document suggests that "normal EWA adaptive management decision-making procedures" (p. 6.1-117) will be used, suggesting that existing failed procedures will continue to be used in the future. The lack of an effective adaptive management program is very likely to result in impacts higher than those projected. If the agencies define the project as including an adaptive management program, they must include a more credible program than has been developed to date.

Impacts to Native American Communities

The document does not adequately describe potential impacts on Native American communities who have traditionally relied on salmon. Water projects, particularly the CVP, have a long history of failing to consider adequately the impacts of water project construction and operation on Native American communities. Tribes on the Sacramento, Trinity, Klamath and other river systems could be adversely affected by the proposed project. These impacts are not adequately discussed in Section 7.10.

Recommendations: The above comments include several specific recommendations. NRDC also recommends that DWR and the Bureau take the following general actions to address the potential violations of legal requirements discussed above:

- Withdraw this document and reissue a new DEIR/DEIS to address the above concerns.

- Clearly commit to full new DEIR/DEIS to analyze the potential impacts of any change in SWP pumping levels, once additional detail is available regarding the decline of the health of delta fisheries.

- Prepare a preferred alternative that would significantly reduce total delta diversions, with the reduction focused on months during which fisheries agencies believe that the delta environment is particularly vulnerable.

- Prepare an alternative designed to provide maximum water supply reliability, as opposed to increased water deliveries. This alternative should focus on the reliability benefits of local water supply development and reduced delta diversions.

- Ensure that the amount of water dedicated to protection of the Bay-Delta ecosystem in the preferred alternative is equal to or greater than the amount of water dedicated to environmental protection in the CALFED ROD.

- Clearly indicate that existing ESA assurances for the delta pumps will be terminated, and uncompensated pumping reductions will resume, if the EWA does not receive the assets anticipated in the final EIR/EIS.

Thank you for considering our comments.

Barry Nelson
Senior Analyst

Att: Effects of Exports on Delta Smelt Population Abundance - Preliminary Analyses, Tina Swanson, The Bay Institute, November 2005

Letter from the National Marine Fisheries Service to the State Water Resources Control Board, August 2, 2005